**Improvements Are Needed in the Management
of Mid-Level Computer Consolidation to
Ensure the Accomplishment of Project Goals**

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DEPARTMENT OF THE TREASURY
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INSPECTOR GENERAL
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ADMINISTRATION

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MEMORANDUM FOR DEPUTY COMMISSIONER FOR MODERNIZATION & CHIEF
INFORMATION OFFICER

FROM: Pamela J. Gardiner
                               Deputy Inspector General for Audit

SUBJECT: Final Audit Report - Improvements Are Needed in the
                               Management of Mid-Level Computer Consolidation to Ensure the
                               Accomplishment of Project Goals (Audit # 200120012)

This report presents the results of our review of the Tier 2 Consolidation Project. The
overall objective of this review was to evaluate the project management process and
controls over the Internal Revenue Service's (IRS) effort to consolidate mid-level
computer systems.

In April 2000, the IRS established the Tier 2 Consolidation Project Office (T2CPO) to
manage the consolidation of mid-level computer systems as part of the Information
Technology Services[1] organization's strategic goal to optimize corporate data
processing activities. Another goal of the Tier 2 Consolidation Project is to reduce the
risk of computer failures resulting from the inability to obtain repair parts and software
upgrades for the aging computer systems. The consolidation is expected to be
completed at a cost of approximately $178 million over a 6-year period ending
December 31, 2004.

In summary, we found that to manage the consolidation of Tier 2 systems, the T2CPO
prepared some key project management documents, established several reporting
measures to monitor the consolidation progress, and performed a mid-project review to
ensure that key issues were identified for resolution. However, improvements are
needed in project management to ensure the accomplishment of project goals.

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[1] Effective March 30, 2001, the IRS' Information Systems organization was renamed Information Technology
Services.

The IRS has implemented several information system life cycle methodologies, which are intended to provide a structured approach for the development and ongoing operation of information technology systems. None of these methodologies were being followed by the T2CPO. The IRS also did not implement an Investment Decision Management (IDM) process[2] that provided for proper funding and monitoring of the Tier 2 Consolidation Project. This reduces project management accountability for achievement of project goals and compliance with life cycle policies and documentation requirements.

The lack of proper funding and monitoring has also contributed to significant consolidation risks, including inadequate staffing at the project office and computing centers, insufficient training for systems and database administrators, and a delay in implementing an automated disaster recovery process. Additional project management issues requiring management's attention include the following:

- Only $4.4 million of the $12.2 million spent in Fiscal Year (FY) 2001 through July 12, 2001, for hardware, software, maintenance, and contractor support was charged to the Tier 2 Consolidation Project. In addition, labor costs for the T2CPO staff and other IRS employees supporting the consolidation effort were not charged to the project.

- The T2CPO Business Case contained calculation errors that resulted in cost savings being overstated by $147.4 million for FY 2001 through FY 2004. The business case also did not reflect investment costs of approximately $5.8 million for the T2CPO staff. In addition, the business case was not approved until July 2001, even though several applications had already been consolidated and several more were in the process of being consolidated.

- Project status reports contained inconsistencies, risk mitigation activities were incomplete, and only 3 of 10 applications consolidated prior to January 1, 2001, had obtained a security certification as of August 2001.

The Tier 2 Consolidation Project has already encountered significant delays in consolidating applications which, when combined with the unresolved risks and project management issues, increase the likelihood of cost overruns and possible failure of the project to achieve intended goals.

Management's Response: IRS management agreed with the recommendations presented in the report. Corrective actions taken and planned will improve project management. Management's complete response to the draft report is included as Appendix V.

Copies of this report are also being sent to the IRS managers who are affected by the report recommendations. Please contact me at (202) 622-6510 if you have questions or Scott E. Wilson, Assistant Inspector General for Audit (Information Systems Programs), at (202) 622-8510.

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[2] IDM is a process to select initiatives that are linked to the strategic plan and justify those investments through cost-benefit analyses conducted at key milestones throughout each investment's life cycle.

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**Improvements Are Needed in the Management of Mid-Level Computer
Consolidation to Ensure the Accomplishment of Project Goals**

Background	The Federal Government has made significant investments in Information Technology (IT). Unfortunately, the result of these investments has often been that the projects are not completed within budget and fail to significantly improve mission performance. To address this problem, the Congress enacted several major reforms in the 1990s to improve management processes, including the selection and management of IT resources. For example, the Clinger-Cohen Act[1] requires federal agencies to have processes and information in place to help ensure that IT projects are being implemented at acceptable costs, within reasonable and expected time frames, and are contributing to tangible, observable improvements in mission performance.

The Fiscal Year (FY) 2001 – 2002 Internal Revenue Service (IRS) Information Technology Services (ITS)[2] Strategy and Program Plan includes a strategy to optimize corporate data processing activities. The IRS' ITS organization plans to accomplish this strategy by consolidating existing non-integrated computer systems that are geographically dispersed and realigning the processes and labor in support of that environment. The IRS considers a more centrally managed and scalable technical infrastructure as a prerequisite for both Business Restructuring and IT Modernization.

A consulting firm, hired by the IRS to help implement organizational modernization, reported in 1999 that the IRS' current Tier 2 infrastructure[3] included an estimated 107 applications and supporting data residing on approximately 660 individual platforms supplied by 10 vendors in 60 locations. In April 2000, the IRS established the Tier 2 Consolidation Project Office (T2CPO) to manage the consolidation of all mid-level

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[1] Clinger-Cohen Act, Pub. L. No. 104-106, Division E (1996) (codified at 40 U.S.C. Chapter 25).
[2] Effective March 30, 2001, the IRS' Information Systems organization was renamed Information Technology Services.
[3] The Tier 2 infrastructure consists of mid-range computers or mid-level systems.

computer systems to 16 platforms supplied by 2 vendors at 13 sites.

The goals of the Tier 2 Consolidation Project are to optimize corporate data processing activities and reduce the risk of computer failures resulting from the inability to obtain repair parts and software upgrades for the aging computer systems. The IRS expects to complete the Tier 2 consolidation at a total cost of approximately $178 million in 6 phases over a 6-year period. The final phase of the Tier 2 consolidation effort is scheduled for completion by December 31, 2004.

The audit was conducted at the IRS' ITS office in New Carrollton, Maryland during May through August 2001. This audit was scheduled as part of the Treasury Inspector General for Tax Administration's (TIGTA) 2001 Annual Audit Plan and was performed in accordance with *Government Auditing Standards*. Detailed information on our audit objective, scope, and methodology is presented in Appendix I. Major contributors to the report are listed in Appendix II.

A Single Information System Life Cycle Methodology Is Needed for All Non-Business Systems Modernization Projects

The IRS is currently in the early phases of the Business Systems Modernization (BSM) effort to replace all its major information systems. In December 1998, the IRS selected the Computer Sciences Corporation (CSC) as the Prime Systems Integration Services Contractor (PRIME) for the BSM effort.

The IRS also has what are considered non-BSM projects, including the Tier 2 Consolidation Project. While a prior TIGTA report[4] detailed that the IRS is making progress in implementing a disciplined information system life cycle methodology[5] required for effective management of BSM

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[4] *Implementation of the New Methodology for Systems Modernization Needs Increased Focus and Support* (Reference Number 2001-20-015, dated November 2000).

[5] An information system life cycle methodology provides a structured approach for the development and ongoing operation of IT systems. The life cycle consists of phases through which an information system passes from beginning to end. The end of each phase corresponds to a logical milestone used to measure progress. The life cycle methodology also specifies what documentation (e.g., deliverables) will be generated.

projects, the IRS has not established a single disciplined process for IT projects not considered part of the modernization effort.

BSM projects

The first priority of the PRIME was to implement an information system life cycle environment patterned after the CSC's Catalyst methodology.[6] The IRS expanded the scope of Catalyst to form an IRS-specific methodology known as the Enterprise Life Cycle (ELC). The ELC implements a set of repeatable processes and a system of reviews, checkpoints, and milestones that reduce the risks of a system development program and ensure alignment with the IRS' overall business strategy. By using the ELC for BSM projects, the PRIME should meet or exceed the Capability Maturity Model (CMM)[7] Level 3 for software development and acquisition, which ensures that the process for both management and engineering activities is repeatable and defined.

Non-BSM projects

For the non-BSM projects, the IRS has implemented several information system life cycle methodologies with different phases and milestones over the past several years. These include the:

- Enterprise Life Cycle.

- Enterprise Life Cycle-Lite.

- Software Development Life Cycle.

- Enhanced-Software Development Life Cycle.

- Information System Life Cycle.

The T2CPO is not following any life cycle methodology, but it prepared some key project documents and established measures to monitor the consolidation progress based on

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[6] The Catalyst methodology is a fundamental business change methodology based on a collection of best practices.

[7] The Software Engineering Institute's CMM is a structured process that helps organizations improve their abilities to consistently and predictably acquire and develop high-quality information systems.

prior project management experience. The absence of a standardized life cycle process for non-BSM projects contributed to the T2CPO not following a specific life cycle methodology. The lack of a consistent, repeatable management approach to structuring and controlling the system development process increases the risk that projects will not be completed on time or within budget.

Recommendation

The Deputy Commissioner for Modernization & Chief Information Officer should:

1. Establish one standardized information system life cycle methodology for all non-BSM projects, including the Tier 2 Consolidation Project.

Management's Response: Management developed the ELC-Lite life cycle methodology, mandated its use for all non-BSM projects supported by the Systems Development organization including Tier 2 Consolidation, and is working with business partners to expand ELC-Lite to meet the requirements for all ITS non-BSM projects.

Office of Audit Comment: We believe the IRS should have one life cycle methodology for all non-BSM projects regardless of the IRS organization managing the project. Having one methodology will assist the IRS in complying with the requirements of the Clinger-Cohen Act, facilitate greater consistency in the way projects are managed, and allow the IRS to gain expertise in one methodology.

Proper Funding and Monitoring Would Enhance Project Management and Accountability

The IRS' Investment Decision Management (IDM) is a process to select initiatives for funding that are linked to the strategic plan[8] and justify those investments with cost-benefit analyses conducted throughout each investment's life cycle. The IDM process is designed in accordance with the Office of Management and Budget (OMB) Circular A-11, *Preparation and Submission of Budget Estimates*, which provides guidance on budget submissions and capital acquisitions, and OMB

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[8] The strategic plan is a document used to align an organization and budget structure with organizational priorities, missions, and objectives.

Circular A-130, *Management of Federal Information Resources*, which deals with the management of federal information resources and evaluating IT investments. The IDM process consists of:

- Selecting strategic initiatives requiring capital acquisitions for inclusion in the IRS investment portfolio[9] and in associated budget requests.

- Controlling those investments for capital acquisitions within the investment portfolio.

- Evaluating the business results of IRS investment initiatives.

Although the Tier 2 Consolidation Project was selected as part of the investment portfolio, the IRS did not implement an IDM process that ensured proper funding and monitoring of the project.

Project funding

The purpose of the select phase of the IDM process is to maximize mission performance by assessing, prioritizing, and funding projects based on alignment with the organization's strategic plan, benefits, costs, and risks. One of the key principles for life cycle management contained in the Department of the Treasury's *Information System Life Cycle Manual* is that a project should not proceed until resource availability is assured. Full funding improves project management and increases the accountability for the achievement of baseline[10] goals.

Funding has been a serious issue with the Tier 2 Consolidation Project since the current IDM process has resulted in the selection of projects without the availability of sufficient funding. The FY 2001 funding for the project was initially reduced from the requested $26.1 million to $11.2 million; it was subsequently reduced to $5.7 million.

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[9] The IRS investment portfolio consists of BSM and non-BSM projects selected in the IDM process for funding, control, and evaluation.
[10] A baseline consists of establishing a point-in-time measurement from which to monitor, measure, and control project performance and progress.

As a result, the T2CPO did not receive any funding for
software and discretionary costs such as overtime, training,
and travel. The FY 2001 appropriations also did not include
full funding of hardware, maintenance, and contractor
support (see Table 1).

Table 1: Tier 2 Consolidation FY 2001 Funding

Expense Item	Amount Requested by the T2CPO	Amount Funded for the T2CPO	Reduction
Hardware	$14,000,000	$3,644,000	$10,356,000
Software	$5,000,000	$0	$5,000,000
Maintenance	$2,200,000	$100,000	$2,100,000
Contractor Support	$4,500,000	$2,000,000	$2,500,000
Overtime	$50,000	$0	$50,000
Travel	$340,000	$0	$340,000
Training	$30,000	$0	$30,000
Totals	**$26,120,000**	**$5,744,000**	**$20,376,000**

Source: IRS FY 2001 spending plans for Tier 2 consolidation.

For FY 2002, the T2CPO has requested $36 million;
however, that amount is expected to be cut to $15 million.
The initiation of projects without certainty of if or when
funding will be available can often result in poor planning,
acquisition of assets not fully justified, higher acquisition
costs, possible loss of sunk costs with project cancellation,
or the expenditure of funds from other program areas.

Project monitoring

The control phase of the IDM process consists of a
coordinated set of procedures to manage the investment
portfolio by monitoring newly approved initiatives, ongoing
projects, and operational systems with respect to cost,
schedule, and performance. As part of the monitoring
process, each project should be reviewed at key milestones
in its life cycle. Steering committees serve a key role in
project monitoring by involving executive management in
directing and controlling projects, such as advancing a
project from one milestone to the next. The committee also
ensures compliance with life cycle policies and
documentation standards.

The IRS did not implement an IDM process that ensured sufficient monitoring of the Tier 2 Consolidation Project by an Executive Steering Committee (ESC). While the IRS initiated the effort to consolidate its Tier 2 systems on June 7, 1999, the Project Office was not established until April 2000 and did not begin going before the Corporate Computing ESC until February 28, 2001. Although the ESC should ensure compliance with life cycle policies and procedures, the T2CPO is not following a specific life cycle to manage the project. As a result, the project plan did not contain several required components, other necessary project management plans have not been prepared, and consolidated applications were placed into production without the completion of an approved baseline business case[11] and security certification.

The lack of proper funding and monitoring has also contributed to significant consolidation risks identified by the T2CPO at a mid-project review meeting held in April 2001, including:

- Only 14 of the proposed 24 T2CPO positions for project planning and oversight were staffed.

- An additional 132 personnel needed to support the consolidated environment in the computing centers are unfunded.

- The T2CPO was not allocated funds to train systems and database administrators on the new hardware and software technology.

- Implementation of an automated disaster recovery process has been delayed.

The Tier 2 Consolidation Project has already encountered significant delays in consolidating applications, and the prospect of completing the consolidation by December 31, 2004, is unlikely. For example, only 3 of 13 (23 percent) applications scheduled for consolidation between January 1, 2001, and July 31, 2001, were timely

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[11] The purpose of the business case is to validate the initial project need, justify funding of the investment, and establish the baseline to control and evaluate the investment.

consolidated. The combination of significant consolidation risks and schedule delays increase the likelihood of cost overruns and possible failure of the project to achieve intended goals.

Recommendations

The Deputy Commissioner for Modernization & Chief Information Officer should ensure that:

2. The IDM process assures proper funding for approved non-BSM projects, including Tier 2 consolidation.

<u>Management's Response</u>: Management will issue IDM guidelines and processes for investment decisions that ensure proper project funding and monitoring to enhance project management and accountability for both BSM and non-BSM IT projects.

3. The ESCs effectively monitor non-BSM projects to ensure compliance with life cycle policies and documentation standards.

<u>Management's Response</u>: Management is developing audit procedures for ELC-Lite compliance and will add a supplement to the ELC-Lite that prescribes procedures and practices for ESC operation. The procedures will include templates for the agenda, probes, and specific items to be reviewed (including compliance with life cycle policies and documentation standards).

Complete Capturing of Project Costs Would Improve Determination of Investment Results

The Clinger-Cohen Act requires agencies to determine the results of IT investments and identify significant deviation(s) from costs, performance, or schedule. The Department of the Treasury stipulates that project costs include accounting for the spending of all resources, including items such as the cost of staff hours, contractor costs, equipment, and maintenance. To accurately capture project costs, IRS procedures require the tracking of IT expenditures within the IRS' financial system by using a five-digit sub-project code. Labor costs are also tracked through the payroll system by entering the code with the time and attendance records.

Although the T2CPO was assigned a sub-project code in FY 2001, only a portion of the funds expended for equipment and maintenance were charged to the project's five-digit code. As of July 12, 2001, only $4.4 million of the $12.2 million (36 percent) spent in FY 2001 for hardware, software, maintenance, contractor support, and site preparation was charged to the Tier 2 Consolidation Project (see Table 2).

Table 2: Allocation of Tier 2 Consolidation Expenditures

Expense Item	Amount Charged to the T2CPO	Amount Charged to Other Projects	Total Amount
Hardware	$1,730,050	$7,471,893	$9,201,943
Software	$418,000	$0	$418,000
Maintenance	$200,000	$368,878	$568,878
Contractor Support	$2,000,000	$0	$2,000,000
Site Preparation	$4,757	$0	$4,757
Totals	**$4,352,807**	**$7,840,771**	**$12,193,578**

Source: IRS requisitions for Tier 2 consolidation expenditures.

In addition, the labor costs for the project office staff and other IRS employees required to support the consolidation effort in application design, testing, and implementation were not charged to the project's code. Project costs were charged to other project codes because of the lack of funding.

By September 21, 2001, IRS requisitions for Tier 2 consolidation expenditures during FY 2001 totaled $21.3 million; however, only $7.9 million (37 percent) was charged to the Tier 2 Consolidation Project. In addition, an ITS organization outside of the T2CPO acquired contractor support totaling $645,000 for services that included program management and oversight support for Tier 2 consolidation. By not properly accounting for all costs, the IRS cannot determine the actual results of the IT investment and comply with the Clinger-Cohen Act requirements to identify significant deviation(s) from costs, performance, or schedule.

Recommendation

The Deputy Commissioner for Modernization & Chief
Information Officer should ensure that:

4. All expenditures for Tier 2 consolidation are charged to
   the T2CPO sub-project code.

<u>Management's Response</u>: Management centrally funds the
T2CPO and uses the assigned code to track all Tier 2
consolidation expenditures, including all labor and
non-labor charges. The T2CPO provided directions on the
use of the T2CPO code to affected areas.

**A Revised Business Case Is
Needed to More Accurately
Project Tier 2 Consolidation
Investment Benefits**

The purpose of a project business case is to substantiate the
initial project need to the investment decision-makers;
provide justification for prioritizing, selecting, and funding
the investment throughout its life cycle; and establish the
baseline to control and evaluate the investment. Estimated
costs and benefits for each alternative solution under
consideration are key components of the business case,
providing the basis for making investment decisions and for
evaluating investment performance. The Clinger-Cohen Act
and OMB Circular A-130 also require that agencies update
the cost-benefit analyses throughout the information system
life cycle.

The Tier 2 Consolidation Business Case, which was not
approved until July 2001, included many of the necessary
components to satisfy the OMB and Clinger-Cohen Act
requirements. The cost savings in the business case for
FY 2001 through FY 2004 were primarily derived from the
reduction in both the number of Systems Administrators
(SA) and maintenance costs. However, errors in both
calculations (detailed in Appendix IV) resulted in the
estimated savings being overstated by $147.4 million
($135 million from a reduced number of SA and
$12.4 million from reduced maintenance costs). The
business case also does not reflect investment costs of
approximately $5.8 million for the project office staff. As a
result, the business case overstated benefits and omitted
investment costs, potentially preventing the ESC from
making an informed investment decision.

In addition, the business case does not identify the resource, technical, and telecommunications requirements for all applications in determining the cost estimates. The number of applications identified for consolidation has also increased from 107 to 220. As a result, the T2CPO anticipates that it will have to purchase 9 additional systems at a cost of approximately $36 million and that an additional 76 SA will be required to operate the consolidated environment. The T2CPO advised that revisions were necessary and would be incorporated into a revised business case.

Recommendation

The Deputy Commissioner for Modernization & Chief Information Officer should ensure that:

5. The business case is revised to more accurately identify investment benefits and costs.

Management's Response: Management will incorporate the T2CPO staffing costs and corrected methodologies and calculations into a revised business case.

Additional Measures Would Improve Project Status Tracking and Risk Mitigation

Management of IT projects must include activities that identify, quantify, and control project risks. During April 2001, the T2CPO performed a mid-project review, referred to as an In-Process Review (IPR), to ensure that key issues were identified for resolution. The IPR identified 20 risks and established their status, risk mitigation actions, and target completion dates. The risks were also elevated to the Corporate Computing ESC.

In addition, the T2CPO implemented project status reporting to monitor the progress of application development during the consolidation process and established a risk management process to identify and track risks for each application. However, the T2CPO could improve the project status tracking and risk mitigation process by increasing the accuracy and consistency of the various reports, prioritizing identified issues for resolution, and developing a risk management plan detailing the risk management process.

Project status reporting

The Department of the Treasury's *Information System Life Cycle Manual* explains that project status reports are necessary for management to determine whether appropriate progress is being made during the development process. Status reports also serve as the basis for coordinating preventive and/or corrective actions to problems. The T2CPO had established several reporting measures to monitor the consolidation progress of the individual applications and the overall status of the Tier 2 Consolidation Project. These include:

- Biweekly Status Report – This status report shows the overall progress of consolidating the individual applications in a color coding scheme of green, yellow, or red to identify the risk of potential delays.[12]

- Milestone Progress Report (MPR) – The MPR reflects the proposed completion date and the color-coded status of the major milestones for each application.

- Work Breakdown Structure (WBS) – The WBS contains the tasks to consolidate the individual applications and provides the percentage of task completion and the start and finish dates for each task.

The T2CPO needs to continue improving the accuracy and consistency of the various reports. For example, the MPR color-coding scheme did not always coincide with the activity status (e.g., green status with expired completion dates). A review of the May 17, 2001, MPR reflected that 20 of the 23 (87 percent) applications scheduled for consolidation between January 1, 2001, and December 31, 2001, had a green status even though at least one of the activities had an expired completion date.

In addition, project status inconsistencies existed between the biweekly status reports and MPRs. Several of the MPR completion dates were also not consistent with the dates reflected in the WBS. These inconsistencies occurred

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[12] Green – No Risk, Yellow – Moderate Risk, and Red – Significant Risk.

primarily because the information contained in the lower-level report (i.e., WBS) was not linked directly into the higher-level report (i.e., MPR). The lack of consistency in the project status reports increases the possibility that schedule slippage will not be identified early enough to initiate mitigation measures and prevent potential project delays and cost overruns.

Risk management process

Risk management is the process of identifying, analyzing, and tracking risks; assessing the probability that risks will occur; and determining their potential impacts in such areas as cost overrun, schedule slippage, and project failure. A key consideration for developing the risk management requirements is to specify what criteria will be used to analyze and prioritize risks and assess the status of the mitigation activity. The result of this process serves as the basis for development and implementation of risk reduction actions to either reduce the risk or resolve the issue.

The T2CPO established a risk management process to identify, analyze, and track risks. During the initiation and status meetings for the individual applications, the T2CPO identifies issues and risks for tracking in an open actions database; each is assigned to a person responsible for resolving the issue or risk. Someone from the T2CPO is also assigned to follow up on the status of the risk.

However, risks were not prioritized (i.e., low, medium, high) in the open actions database to determine if they should be elevated to an ESC, and 70 of the 101 (69 percent) action items in the May 22, 2001, open actions report had expired completion dates. In addition, the T2CPO had not prepared a risk management plan detailing the risk management process because it had insufficient staffing and was not following a life cycle methodology. Incomplete risk mitigation activities increase the possibility of schedule slippage, cost overrun, and possible project failure.

Recommendations

The Deputy Commissioner for Modernization & Chief Information Officer should ensure that:

6. The Tier 2 Consolidation Project status reports are linked to improve their accuracy and consistency.

<u>Management's Response</u>: Management will better define the criteria for determining the overall status represented in the Biweekly Status Report. The overall status in the Biweekly Status Report and the MPR will be linked automatically. Management also resolved discrepancies between the MPR and WBS by developing an automated process for generating the MPR directly from the WBS.

7. A risk management plan is developed that includes a process to prioritize risks in the open actions database and to actively monitor risk mitigation.

<u>Management's Response</u>: Management will replace its current risk management process with the process used by the Service Center Mainframe Consolidation (SCMC) effort. This process is a two-tiered management review/prioritization process. The T2CPO has documented the new process in a draft plan and is modifying the SCMC automated system to meet the unique needs of the T2CPO.

Certification of Several Consolidated Applications Would Improve System Security

OMB Circular A-130 and the *Department of the Treasury Security Manual* require that all information systems that process taxpayer data be certified prior to being placed into operation. Certification requires a comprehensive evaluation of technical and non-technical security features to determine the extent to which system design and implementation meet a specified set of security requirements. The Certification Program Office, under the direction of the Office of Security and Privacy Oversight, is responsible for the security certification process for IRS information systems.

A prior TIGTA audit[13] reported that a majority of the IRS' systems were not certified as required. Of the 258 sensitive systems identified on the Certification Program Office's inventory as of January 2000, 232 (90 percent) were not certified. Management responded that the Office of Security and Privacy Oversight started an initiative to improve the certification process, including implementing systems without full certification on a very limited basis.

The T2CPO requires system certification as a prerequisite for consolidation, and all applications scheduled for consolidation between January 1, 2001, and December 31, 2001, are in the process of being certified. However, only 3 of 10 (30 percent) consolidated applications implemented prior to January 1, 2001, were certified as of August 2001. These 10 applications had either already been consolidated or were in the process of being consolidated prior to the establishment of the T2CPO in April 2000 and the implementation of controls to ensure system certification. Not certifying the adequacy of security controls in the systems increases the risk of security breaches and possibly jeopardizes the privacy for over 126 million individual and 6 million business taxpayers.

Recommendation

The Deputy Commissioner for Modernization & Chief Information Officer should ensure that:

8. All consolidated Tier 2 applications obtain the required security certifications.

Management's Response: Management will certify the production systems that have not been certified and implement a process to ensure applications are certified before being put into production. Since June 2001, no application has been implemented in the Tier 2 consolidated

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[13] *Certifying the Security of Internal Revenue Service Computer Systems Is Still a Material Weakness* (Reference Number 2000-20-092, dated June 2000).

infrastructure without a security certification. Security certification will continue to be a key milestone in the WBS.

Detailed Objective, Scope, and Methodology

The overall objective of this audit was to evaluate the project management process and controls over the Internal Revenue Service's (IRS) effort to consolidate mid-level computer systems.

To accomplish this objective, we:

I. Determined whether the project office followed the IRS' system development methodology and life cycle process.

    A. Identified the IRS' system development methodology and life cycle process for internal system development projects.

        1. Interviewed IRS representatives responsible for establishing the system development methodology and life cycle process.

        2. Obtained and reviewed current policy and guidelines and identified required milestones, stages, and deliverables.

    B. Reviewed the system development methodology and life cycle process followed by the Tier 2 Consolidation Project Office (T2CPO).

        1. Interviewed project office personnel to determine the system development methodology that was adopted for the project.

        2. Interviewed project office personnel and reviewed project documentation to determine the system life cycle process that is being followed.

            a. Life Cycle Stages.

            b. Project Milestones.

            c. Project Deliverables.

    C. Compared the IRS' system development methodology and life cycle process for internal system development projects to the process being followed by the project office for the Tier 2 computer consolidation.

II. Determined the accuracy and completeness of key project documents and plans for the Tier 2 Consolidation Project.

    A. Reviewed the business case and determined whether:

        1.   Required components were completed, including the requirements of the Clinger-Cohen Act[1] for Capital Planning and Investment Control and technical requirements for application development and telecommunications needs.

        2.   Estimated costs were based on identified resource requirements.

        3.   Cost and benefit figures were updated based upon revised cost estimates and staffing reductions.

        4.   The business case was formally approved.

B.   Reviewed the project management plan for required elements and proper approval.

C.   Determined what other project plans were prepared by the T2CPO and whether they contained required elements.

D.   Determined what additional project plans were prepared specifically for the phase 3 applications.

E.   Determined if a Work Breakdown Structure was prepared, including application(s) development activities, with a critical path to identify key resource requirements.

F.   Determined if application(s) requirements documents were prepared and included business resumption and disaster recovery.

G.   Determined if security certification and accreditation will be obtained prior to an application being placed into production.

III.   Determined whether the project was sufficiently funded and expenditures were properly tracked.

A.   Reviewed the spending plans submitted by the T2CPO.

        1.   Determined whether the spending plans are consistent with the figures contained within the business case and cost estimate document.

        2.   Compared the staffing and budget amounts requested by the T2CPO to the actual amount funded by the IRS to determine if the project received requested funds.

        3.   Determined from the T2CPO how the unfunded budget items were addressed.

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[1] Clinger-Cohen Act, Pub. L. No. 104-106, Division E (1996) (codified at 40 U.S.C. Chapter 25).

B.   Determined whether applications owners and support organizations have sufficient resources to implement consolidation of phase 3 applications.

    1.   Reviewed resource requirements included in the individual applications' development plans to determine the total resource requirements for the application owners and support organizations.

    2.   Interviewed personnel in the Systems Development function, the computing centers, and the Office of Security and Privacy Oversight to determine whether their resources are sufficient to support implementation of phase 3 applications consolidation.

C.   Determined if expenses for Tier 2 computer consolidation are properly attributed to the project.

    1.   Reviewed governmental requirements and IRS procedures for tracking expenses for Information Technology Services (ITS)[2] projects.

    2.   Determined what accounting code has been assigned to track costs associated with the effort to consolidate Tier 2 systems and reviewed requisitions for software, equipment, contractor support, and other related project costs to verify proper recording of project expenses.

    3.   Interviewed application owners and supporting organizations for phase 3 applications to determine which accounting codes the staff hours expended by their personnel, as part of the consolidation effort, have been attributed to.

    4.   Determined if the project office is monitoring actual versus budgeted variations.

IV.   Evaluated the risk management process, including project status reporting and IRS management oversight.

A.   Determined whether risks are being identified and controlled for resolution.

    1.   Reviewed procedures established by the project office to identify risks.

    2.   Determined how risks are being controlled.

    3.   Reviewed procedures for prioritizing risks and elevating critical risks for resolution.

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[2] Effective March 30, 2001, the IRS' Information Systems organization was renamed Information Technology Services.

B.   Determined what project status reports are prepared by the project office to monitor progress and evaluated the reports' accuracy in reflecting the current status of the project.

C.   Determined what senior ITS and IRS management committees have been established to oversee the Tier 2 computer consolidation effort.

V.   Evaluated the impact on the consolidation schedule of including more applications in the Tier 2 Consolidation Project.

A.   Interviewed personnel overseeing the identification of applications for consolidation to determine the number of applications that will be added.

B.   Interviewed T2CPO personnel, application owners, and supporting organizations to determine the amount of resources that will be required to consolidate the additional applications.

C.   Determined whether the Tier 2 Consolidation Project's progress report was updated to reflect the current status.

D.   Reviewed the basis for authorizing additional applications.

Major Contributors to This Report

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Outcome Measures

This appendix presents detailed information on the measurable impact that our recommended corrective actions will have on tax administration. These benefits will be incorporated into our Semiannual Report to the Congress.

Type and Value of Outcome Measure:

- Reliability of Information – Actual; $7.8 million in expenditures for Tier 2 consolidation (see page 8).

Methodology Used to Measure the Reported Benefit:
To capture Information Technology (IT) project costs, expenditures are tracked within the Internal Revenue Service (IRS) financial system using a five-digit sub-project code. As of July 12, 2001, the IRS financial system showed that $4.4 million[1] was charged to the Tier 2 Consolidation Project Office (T2CPO) in Fiscal Year (FY) 2001 for hardware, software, maintenance, contractor support, and site preparation. We calculated that an additional $7.8 million was spent on hardware and maintenance by reviewing requisitions associated with Tier 2 consolidation.

Requisition Number	Amount Charged to the T2CPO	Amount Charged to Other Projects	Total Amount
Q1QM01SSD04-000	$2,000,000		$2,000,000
Q1QM01SSD28-000	$1,200,000	$597,026	$1,797,026
Q1QM01SSD60-000	$5,050		$5,050
Q1QCD2AOA16-000		$2,448,592	$2,448,592
Q1QE30CFB42-00	$1,143,000	$1,657,538	$2,800,538
Q1QCD2AOA15-000		$1,420,286	$1,420,286
Q1QM01SSD46-000		$83,494	$83,494
Q1QM01SSD47-000		$478,240	$478,240
Q1QM01SSD48-000		$1,155,595	$1,155,595
Q1QFC5R183-000	$4,757		$4,757
Totals	**$4,352,807**	**$7,840,771**	**$12,193,578**

Type and Value of Outcome Measure:

- Reliability of Information – Potential; $147.4 million reduced investment benefits (see page 10).

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[1] The reliability of the data obtained from the IRS' Automated Financial System was not verified.

Methodology Used to Measure the Reported Benefit:
The business case contains overstated investment benefits of approximately $147.4 million for
FY 2001 through FY 2004. The cost savings in the business case were primarily derived from a
case study that estimated the reduction in both the number of Systems Administrators (SA) and
maintenance costs realized by the consolidation of Tier 2 computer systems. The T2CPO
business case cited $260.4 million in benefits from a reduction in the number of SA. However,
the $260.4 million should have been reduced by the cost for SA to operate both the Tier 2
systems remaining in the IRS campuses and the Tier 2 systems currently in production at the
computing centers. The T2CPO also identified another $45.4 million in benefits from reduced
maintenance costs; however, that amount should have been reduced by the maintenance cost for
all Tier 2 systems operating during the consolidation process. As a result, we calculated that the
savings should have been only $125.4 million from the reduction in the number of SA and
$33 million in reduced maintenance costs, which totaled $158.4 million. We then subtracted the
$158.4 million in cost savings from the $305.8 million in cost saving contained in the business
case and determined that the investment benefits were overstated by $147.4 million.

Category	Cost Savings in Business Case	Cost Savings After Recalculation	Overstated Investment Benefits
Systems Administrators	$260,381,279	$125,359,918	$135,021,361
Maintenance Costs	$45,385,963	$33,027,669	$12,358,294
Totals	**$305,767,242**	**$158,387,587**	**$147,379,655**

Type and Value of Outcome Measure:

- Reliability of Information – Potential; $5.8 million increased investment costs (see page 10).

Methodology Used to Measure the Reported Benefit:
The business case also does not reflect investment costs of approximately $5.8 million for the
T2CPO staff for FY 2001 through FY 2004. We calculated the increased investment costs by
identifying the salaries of the assigned project office staff and projecting the salaries over the life
of the project. We did not include additional salary expenses for potential step increases or cost
of living increases.

FY 2001	FY 2002	FY 2003	FY 2004	Increased Investment Costs
$1,073,597	$1,563,423	$1,563,423	$1,563,423	**$5,763,866**

Management's Response to the Draft Report
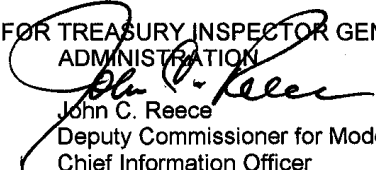
DEPARTMENT OF THE TREASURY
INTERNAL REVENUE SERVICE
WASHINGTON, D.C. 20224

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EPUTY COMMISSIONER

December 18, 2001

MEMORANDUM FOR TREASURY INSPECTOR GENERAL FOR TAX ADMINISTRATION

FROM: John C. Reece
Deputy Commissioner for Modernization and
Chief Information Officer

SUBJECT: Management Response to Draft Audit Report –
"Improvements Are Needed in the Management of
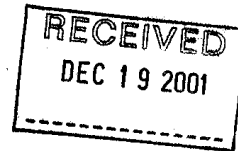Mid-Level Computer Consolidation To Ensure the
Accomplishment of Project Goals" (#200120012)

Your eight recommendations regarding the improvement of our project management processes and controls over the Internal Revenue Service's (IRS) effort to consolidate mid-level computer systems resulted in the development of corrective actions. The corrective actions address these recommendations and are provided in the attached document.

We agree your recommendations will help strengthen and improve our project management processes and controls. We are taking additional actions to include the following:

- Implement a single information system life cycle methodology for all Information Technology Services (ITS) non-Business System Modernization (BSM) projects
  - Ensure proper funding for non-BSM projects through the Investment Decision Management process
  - Use the T2CPO Project Cost Accounting System code to consolidated Tier 2 expenditures
  - Revise the T2CPO business case and improve project status tracking and risk mitigation
  - Obtain security certifications for all consolidated Tier 2 applications
  - Additional detail is included in the management response for these actions.

2

In addition, we have responded to your assessment of a miscalculation to investment benefits and costs and it is addressed in corrective action number five. The T2CPO staffing costs, and the revised benefits costs calculations will be incorporated into the Business Case.

If you have any questions, please call me at (202) 622-6800. Members of your staff may call Thomas Mulcahy, Office Manager, Program Oversight and Coordination, at (202) 283-6063.

Attachment

cc: Associate Inspector General for Audit (Information Systems Programs)
Director, Legislative Affairs

Management Response to Draft Audit Report "Improvements Are Needed in the Management of Mid-Level Computer Consolidation To Ensure the Accomplishment of Project Goals" (#200120012)

<u>**Recommendation #1**</u>

The Deputy Commissioner for Modernization and Chief Information Officer should establish one standardized information system life cycle methodology for all non-BSM projects, including Tier 2 consolidation.

<u>**Assessment of Cause #1**</u>

The Information Technology Services (ITS) organization follows the Enhanced Systems Development Lifecycle (ESDLC), a standardized software development life cycle, for work on our production systems. This standard has lagged behind the rapid changes in technical capabilities and evolving organization structures. While the standard lagged, new projects (non-BSM) took advantage of improved methods and techniques.

<u>**Corrective Actions**</u>

#1a. The Systems Development (SD) organization developed an up-to-date lifecycle methodology based on the Enterprise Life Cycle (ELC). This new life cycle is called ELC-Lite. The Director, SD, mandated the use of ELC-Lite for all non-BSM projects supported by the SD organization including Tier 2 Consolidation.

#1b. The Deputy Commissioner for Modernization and Chief Information Officer is working with the business partners to expand ELC-Lite to meet the requirements for all Information Technology Services (ITS) non-BSM projects.

<u>**Implementation Date of Corrective Actions**</u>

#1a. Completed: August 1, 2001
       Implemented standardized ELC-Lite.

#1b.   Proposed: January 1, 2003
                                       Expand ELC-Lite for ITS
                                       non-BSM projects.

<u>**Responsible Official for Corrective Actions #1a and #1b**</u>

Deputy Commissioner for Modernization/Chief Information Officer M
Chief Information Technology Services M:I
Acting Director, Systems Development M:I:SD
Director, Program Support Division M:I:SD:PS

1

Attachment

**Management Response to Draft Audit Report "Improvements Are Needed in the
Management of Mid-Level Computer Consolidation To Ensure the
Accomplishment of Project Goals" (#200120012)**

Monitoring Plan for Corrective Action #1

The Systems Development Software Quality Council (SQC) will provide oversight for
execution of the action plan. This will include conducting periodic audits of ITS
non-BSM projects, to ensure adherence to the ELC-Lite methodology.

2

Management Response to Draft Audit Report "Improvements Are Needed in the Management of Mid-Level Computer Consolidation To Ensure the Accomplishment of Project Goals" (#200120012)

<u>Recommendation #2</u>

The Deputy Commissioner for Modernization & Chief Information Officer should ensure that the IDM process assures proper funding for approved non-BSM projects, including Tier 2 consolidation.

<u>Assessment of Cause #2</u>

Although we selected projects, including the Tier 2 Consolidation Project (T2CPO), as part of the investment portfolio, the Internal Revenue Service did not implement an Investment Decision Management (IDM) process and guidelines that ensured proper funding and monitoring of the projects.

<u>Corrective Action #2</u>

The Modernization Information Technology Services (MITS) organization will issue approved IDM guidelines and processes for investment decisions that ensure proper project funding and monitoring to enhance project management and accountability for both Business Systems Modernization (BSM) and non-BSM information systems technology projects.

<u>Implementation Date of Corrective Action #2</u>

Proposed: August 1, 2002
Issue approved, documented guidelines and processes for investment decisions that ensure proper project funding and monitoring

<u>Responsible Official for Corrective Action #2</u>

Deputy Commissioner for Modernization and Chief Information Officer M
Director of Financial Policy, Planning and Programs M

<u>Monitoring Plan for Corrective Action #2</u>

Monthly, the Director, Financial Policy, Planning and Programs will assess the development, implementation and effectiveness of the guidelines and process.

3

**Management Response to Draft Audit Report "Improvements Are Needed in the
Management of Mid-Level Computer Consolidation To Ensure the
Accomplishment of Project Goals" (#200120012)**

<u>Recommendation #3</u>

The Deputy Commissioner for Modernization and Chief Information Officer should
ensure that the ESCs for non-BSM projects ensure compliance with life cycle policies
and documentation standards.

<u>Assessment of Cause #3</u>

Currently, we do not have a standard procedure governing the operation of Executive
Steering Committees (ESC). The relatively small number of ESCs required to support
Business System Modernization (BSM) projects allows us to adapt standard practices
that experienced participants will carry forward. As the number of non-BSM projects
increases, the number of experienced participants to cover all events is limited.

<u>Corrective Action #3</u>

The Systems Development (SD) organization is developing audit procedures for ELC-
Lite compliance and will add a supplement to the ELC-Lite that prescribes procedures
and practices for Executive Steering Committee (ESC) operation. These procedures
will include templates for the agenda, probes, and specific items to be reviewed
(including compliance with life cycle policies and documentation standards).

<u>Implementation Date of Corrective Action #3</u>

> Proposed: January 1, 2003
> Develop audit procedures for ELC-Lite
> compliance which include procedures
> and practices for ESC operation.

<u>Responsible Official for Corrective Action #3</u>

Deputy Commissioner for Modernization/Chief Information Officer M
Chief Information Technology Services M:I
Acting Director, Systems Development M:I:SD
Director, Program Support Division M:I:SD:PS

<u>Monitoring Plan for Corrective Action #3</u>

The Systems Development Software Quality Council (SQC) will provide oversight for
execution of the action plan. This will include conducting periodic audits of ITS
non-BSM projects, to ensure adherence to the ELC-Lite methodology.

4

Management Response to Draft Audit Report "Improvements Are Needed in the Management of Mid-Level Computer Consolidation To Ensure the Accomplishment of Project Goals" (#200120012)

<u>Recommendation #4</u>

The Deputy Commissioner for Modernization & Chief Information Officer should ensure that all expenditures for Tier 2 consolidation are charged to the project's code.

<u>Assessment of Cause #4</u>

Our financial plan did not centrally fund the Tier 2 Consolidation Project Office (T2CPO). As a result, we did not use the T2CPO Project Cost Accounting System (PCAS) code to track the spending of all resources, including labor costs.

<u>Corrective Action #4</u>

The Tier 2 Consolidation Project Office (T2CPO) is centrally funded and uses its PCAS code (S13K5) to track all expenditures on Tier 2 consolidation efforts, including all labor and non-labor charges. In addition to T2CPO staff, this includes employees from the Martinsburg Computing Center, the Tennessee Computing Center, the Detroit Computing Center, and the Campuses. The T2CPO provided directions on the use of the T2CPO PCAS code to affected areas.

<u>Implementation Date of Corrective Action #4</u>

Completed: October 1, 2001
Charge all expenditures for Tier 2
consolidation to the T2PCO PCAS code

<u>Responsible Official for Corrective Action #4</u>

Deputy Commissioner for Modernization and Chief Information Officer M
Chief Information Technology Services M:I
Director, Enterprise Operations M:I:E
Program Manager, Tier 2 Consolidation Project Office

<u>Monitoring Plan for Corrective Action #4</u>

The Program Manager, T2CPO, will review the status of Tier 2 consolidation expenditures weekly to ensure that we charge them to the project's PCAS code.

5

**Management Response to Draft Audit Report "Improvements Are Needed in the
Management of Mid-Level Computer Consolidation To Ensure the
Accomplishment of Project Goals" (#200120012)**

<u>**Recommendation #5**</u>

The Deputy Commissioner for Modernization & Chief Information Officer should ensure
that the Business Case is revised to more accurately identify investment benefits and
costs.

<u>**Assessment of Cause #5**</u>

We did not include staff costs for the Tier 2 Consolidation Project Office (T2CPO) in the
original Business Case. Also, minor calculation errors and an alternative methodology
resulted in inaccuracies. The T2CPO could not significantly change the Business Case
until the Deputy Commissioner for Modernization and Chief Information Officer
approved the baseline Business Case in June 2001.

<u>**Corrective Action #5**</u>

We will incorporate the T2CPO staffing costs, and corrected methodologies and
calculations into Revision #1 of the Business Case.

<u>**Implementation Date of Corrective Action #5**</u>

> Proposed: March 1, 2002
> Revise the Business Case to more
> accurately identify investment benefits
> and costs.

<u>**Responsible Officials for Corrective Action #5**</u>

Deputy Commissioner for Modernization and Chief Information Officer M
Chief Information Technology Services M:I
Director, Enterprise Operations M:I:E
Program Manager, Tier 2 Consolidation Project Office

<u>**Monitoring Plan for Corrective Action #5**</u>

The Program Manager, T2CPO, will ensure the staffing costs, correct methodologies
and calculations in Revision #1 of the Business Case more accurately identify
investment benefits and costs.

6

Management Response to Draft Audit Report "Improvements Are Needed in the Management of Mid-Level Computer Consolidation To Ensure the Accomplishment of Project Goals" (#200120012)

<u>**Recommendation #6**</u>

The Deputy Commissioner for Modernization & Chief Information Officer should ensure that the Tier 2 Consolidation Project status reports are linked to improve their accuracy and consistency.

<u>**Assessment of Cause #6**</u>

The audit report mentions two areas of status reporting discrepancies. The first is between the overall status of an application reported on the Bi-weekly Status Report and individual key milestone statuses on the Milestone Progress Report (MPR). The T2CPO lacked definitive criteria for assessing the overall status on the Bi-weekly Status Report, resulting in subjective evaluations. For example, while individual milestones may be behind schedule, the application may have a mitigation plan to recoup the time to successfully deploy on the planned date.

The second area of discrepancies is between the information contained in the individual application Work Breakdown Structures (WBS) and its summary on the MPR.

As long as we generated the Bi-weekly Status Report, WBS, and MPR separately, discrepancies could occur.

<u>**Corrective Action #6**</u>

The Tier 2 Consolidation Project Office (T2CPO) will better define a set of criteria for determining the overall status represented in the Bi-weekly Status Report. We are automatically linking overall status in the Bi-weekly Status Report and Milestone Progress Report (MPR).

We resolved the discrepancies between the MPR and Work Breakdown Structures (WBS) by developing an automated process for generating the MPR directly from the WBS.

<u>**Implementation Date of Corrective Action #6**</u>

> Proposed: February 1, 2002
> Improve the accuracy and consistency
> of T2CP status

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Management Response to Draft Audit Report "Improvements Are Needed in the Management of Mid-Level Computer Consolidation To Ensure the Accomplishment of Project Goals" (#200120012)

<u>**Responsible Officials for Corrective Action #6**</u>

Deputy Commissioner for Modernization and Chief Information Officer M
Chief Information Technology Services M:I
Director, Enterprise Operations M:I:E
Program Manager, Tier 2 Consolidation Project Office

<u>**Monitoring Plan for Corrective Action #6**</u>

The Program Manager, T2CPO, will review status reports to ensure that they are accurate and consistent.

8

Management Response to Draft Audit Report "Improvements Are Needed in the Management of Mid-Level Computer Consolidation To Ensure the Accomplishment of Project Goals" (#200120012)

Recommendation #7

A risk management plan is developed that includes a process to prioritize risks in the open actions database and to actively monitor risk mitigation.

Assessment of Cause #7

The T2CPO recognized that it needed to improve the initial risk management process it put into place. However, lacking sufficient staff or Data Processing Service funding, the Project Office could not allocate the necessary resources to fully implement a satisfactory risk management process.

Corrective Action #7

The T2CPO is replacing its current risk management process with the process successfully used by the Service Center Mainframe Consolidation (SCMC) effort. The TCPO has documented the new process in a draft plan, and is modifying the SCMC automated system to meet the unique needs of T2CPO.

This process is a two tiered management review/prioritization process. The Issue Oversight Committee (IOC), composed of mid-level managers from T2CPO and the Distributed Systems Management Branch (DSMB) will meet to review, evaluate, and prioritize all open and new issues. If we cannot resolve these issues at this level, and the criticality dictates, we will refer them to the Risk Oversight Committee (ROC). The ROC is composed of senior managers from the System Support Division (SSD), augmented by managers from other organizations as appropriate. Prior to forwarding unresolved issues to the ROC, the Action Officer, assigned by the ROC, develops a preliminary Mitigation Plan. The T2CPO will elevate the risk to the appropriate executives if the Action Officer does not act on the Mitigation Plan timely. This process will help eliminate schedule slippage, and cost overrun. We have already begun both the IOC and ROC meetings.

Implementation Date of Corrective Action #7

Proposed: January 1, 2002
Implement a risk management process

9

Mànagement Response to Draft Audit Report "Improvements Are Needed in the Management of Mid-Level Computer Consolidation To Ensure the Accomplishment of Project Goals" (#200120012)

<u>**Responsible Officials for Corrective Action #7**</u>

Deputy Commissioner for Modernization and Chief Information Officer M
Chief Information Technology Services M:I
Director, Enterprise Operations M:IE
Program Manager, Tier 2 Consolidation Project Office

<u>**Monitoring Plan for Corrective Action #7**</u>

The Program Manager, T2CPO, will use the Issue Oversight Committee (IOC) and the Risk Oversight Committee (ROC) processes to prioritize and mitigate risks. He will elevate the risks that continue to the appropriate executives for resolution.

10

Management Response to Draft Audit Report "Improvements Are Needed in the Management of Mid-Level Computer Consolidation To Ensure the Accomplishment of Project Goals" (#200120012)

<u>**Recommendation #8**</u>

All consolidated Tier 2 applications obtain the required security certifications.

<u>**Assessment of Cause #8**</u>

We authorized many systems without certification to implement to avoid Year 2000 processing problems. The current process for receiving a security certification was a significant burden on the applications and the Security Certification Program Office. Because of the time requirements imposed by the documentation creation and review as well as the scheduling of the Security Test and Evaluation and the report on its findings, we sometimes put applications into production before we could complete certification. The Internal Revenue Service and the Department of the Treasury requirements dictate eight documents.

<u>**Corrective Action**</u>

#8a. Certify the remaining production systems without certification. Currently three applications without security certifications are in production. The T2CPO is working to have those projects complete their certification.

#8b. Implement a process to ensure we certify applications before putting them into production. The T2CPO was instrumental in getting a memorandum issued to the operational sites prohibiting the implementation of any application system that does not have a security authorization. The T2CPO has been closely working with the Security Certification Program Office and the applications to ensure we develop and review security documentation, perform the Security Test and Evaluation (STE), and issue a certification before any application becomes operational. Since June 2001 we have not implemented any application in the Tier 2 consolidated infrastructure without a security certification. We anticipate that this policy will continue. Using the Security Office's new automated tools should reduce the documentation burden on applications. T2CPO has also developed a Security STE Status Chart to monitor all security-related activities and documentation. Security certification will continue to be a key milestone in the WBS.

<u>**Implementation Date of Corrective Actions**</u>

#8a.   Proposed: October 1, 2002
                                               Certify the three remaining production
                                               systems without certification

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**Management Response to Draft Audit Report "Improvements Are Needed in the
Management of Mid-Level Computer Consolidation To Ensure the
Accomplishment of Project Goals" (#200120012)**

#8b. Completed: June 30, 2001
     Implement a process to ensure
     applications are certified before
     being put into production.

Responsible Officials for Corrective Actions #8a and #8b

Deputy Commissioner for Modernization and Chief Information Officer M
Chief Information Technology Services M:I
Director, Enterprise Operations M:I:E
Program Manager, Tier 2 Consolidation Project Office

Monitoring Plan for Corrective Action #8

The Program Manager, T2CPO, will continue to monitor timely completion of security
certifications, and to ensure that we do not implement applications before certification.

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